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Lanhui Tu



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Assessment of Trading Possibilities with Stocks in Chinese Financial Market

Student: Lanhui Tu

Supervisor of the bachelor thesis: Ing. Kateřina Kořená, Ph.D

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Ing. Iveta Ratmanová, Ph.D.  
Head of Department



prof. Dr. Ing. Zdeněk Zmeškal  
Dean

**The declaration**

"I hereby declare that I have elaborated the entire thesis including annexes myself."

Ostrava date 03.05.2017.....

Lanhu Tu ..... 涂瀚慧 .....

Student's name and surname

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## **1 Introduction**

In China, stock market plays an important role in Finance. China is a bigger developing country. In term of stock market, China has great potential for development. And the structure of China's stock market is different. In term of the secondary market, the Shanghai stock exchange and the Shenzhen stock exchange is the main stock exchanges on the mainland, the Hong Kong stock exchange and the Taiwan stock exchange is developing.

The main objective is to learn about the China stock market and the structure of the China stock market, and learn more about the details of the China stock exchanges. It can show that the China stock market is developing and the investment of China stock market is good choice, the object is to know the China stock market from the structure. Then it is to learn the stock exchanges according to some indicators, and roughly understand the role of the stock exchange, from the understanding of the stock exchanges, it is useful to know the trading of stock in China, according to the indicators, it is to evaluate the trading in China. In addition, the regulation of trading of the stock exchange is necessary to know. In this country, the stock market develops rapidly, and the thesis selects two stock exchanges to know the trading of the stock market, because Shanghai stock exchange and Shenzhen stock exchange play an important role in stock market, it reflects that behavior of investors and the tendency of the stock market.

This thesis is divided to three parts, the first part is knowledge of the China stock market and overview of the China stock market, it is to know the feature and the function of the stock market. The second part is the structure of the stock market in China in the different angles. The final part is the assessment of trading possibility in China, from the stock exchanges and some indicators, the trading can be evaluated.



## **2 Characteristic and Function of Stock Market**

Stock market is the market place that stock can be issued and traded, and it can be said that it is a place for the sale and transfer of the issued shares. Stocks are traded through the stock market. In general, the stock market can be divided into two parts, primary market and secondary market. Stock market is a part of the financial market as well as financial market is a part of the financial system.

### **2.1 Financial system**

In general, the financial system is the basic framework of the flow of funds in an economy. It is divided into several financial elements, such as financial instruments, market participants and trading methods. At the same time, because the financial activities have a strong externalization, to a certain degree, they can be public goods, therefore, the government's regulatory framework is also an important part in financial system.

In reality, there are different financial systems around the world, it is difficult to apply a relatively unified model for generalization. From an intuitive point of view, there is a more significant difference between the financial systems of developed countries, it is the importance of financial markets and financial intermediaries in different countries.

There are two extremes here, one is Germany, several major banks play a dominant role, but the financial market is not very important, the other one is the United States, the financial market is very large, and it plays an important role, but the bank's concentration is very small. In addition, there are other countries, such as Japan and France, in traditional, the financial system is based on the bank. But in recent years, the financial markets have developed rapidly and are growing fast, and the financial markets in Canada and the UK are more developed than in Germany, But the banking sector is more concentrated than the United States.

#### **Several components of a financial system**

The first is *Financial Sector*, financial sector is composed of various financial institutions and markets, these can provide the financial service for non-financial sectors in the economy.

The second is *Financing Pattern and Corporate Governance*, the financing pattern refers

to the financing behavior of residents, businesses and government, and it also includes basic financing tools. Corporate Governance is a policy about the ways to manage and control the company, it is to coordinate with the benefit of corporate participants. The main corporate participants are composed of shareholders, managers and members of a council. And others include employees, suppliers, customers, banks and other lenders, government policy managers.

The third is *the regulatory system*. The financial system is financial supervision of the duties and the distribution of rights and organizational system.

Thus, the distinction between different financial systems is not only the difference between their constituent parts, but also the difference in their relationships.

### **The content of the financial system**

The financial system includes five parts, financial control system, financial enterprise system, financial supervision system, financial market system and financial environment system.

The first is *financial control system*. On the one hand, the financial control system is a part of the national macro-control system, it includes the coordination with monetary policy and fiscal policy, maintaining the balance between the stability of the currency and the volume of the currency, improvement of the transmission mechanism, statistical monitoring, improvement of the level of regulation and so on, on the other hand, it is the financial control mechanisms, including the mechanism of interest rate formation, the mechanism of exchange rate formation, payment and clearing system, the combination of financial market like currency, capital, insurance.

The second is *financial enterprise system*. The financial enterprise system includes modern financial enterprises, such as commercial banks, securities companies, insurance companies and trust and investment companies. It also includes the reorganization of central banks, commercial banks, policy banks, financial asset management companies and small and medium-sized financial institutions, the development of various financial enterprises and rural credit cooperatives.

The third is *financial supervision system*. The financial supervision system includes the monitoring and precautionary mechanism of financial risk, it implement the mechanism of

market exit, it improves the transparency of regulatory information, and accept social supervision, handle the relationship between supervision and support financial innovation, establish supervision and coordination mechanism. It includes two types of the system, the first is separate operation and separate supervision, such as China Banking Regulatory Commission, the Commission, the CIRC. The second is unified management of mixed operation.

The fourth is *financial market system*. The financial market system includes the expansion of direct financing, the establishment of multiple level capital market system, improvement of the capital market structure, the exploitation of the capital market products, promoting of venture investment and the development of the GEM market, expanding the bond market, and the scale of the issuance of corporate bonds, the development of institutional investors, improve the transaction, registration and clearing system, the development of the futures market.

The fifth is *financial environment system*. The financial environment system includes establishing and improving of the modern property right system, completing the corporate governance structure, establishing and perfecting the social credit system, building a unified national market, transforming the government's economic management functions and completing of the investment system reform.<sup>1</sup>

## 2.2 Financial market

In the concept of the *definition of financial market*, financial market is also known as capital market, it includes two markets, money markets and financing markets, financing refers to the activity that in the process of economic operation, the supply and demand sides of fund adjust the surplus of fund through various financial instruments, it is the general term for all financial transactions. In the financial market, the trading of transactions is a variety of financial instruments, such as stocks, bonds, savings certificates and so on.

In general, financing is divided into two types, *direct financing and indirect financing*. Direct financing is the trading of funds between the two sides, the capital demand group can

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<sup>1</sup> Reference:<http://wiki.mbalib.com/wiki/%E9%87%91%E8%9E%8D%E4%BD%93%E7%B3%BB>

directly raise fund from the social or individual through financial market. Indirect financing is raising fund through the financial institution.

In terms of *financial market characteristics*, the first is liquidity, in the financial market, many investors buy and sell together, so that the success rate of individual investor transactions increased significantly, in others word, when accepting market prices, the buyers of securities can buy the large number of securities they wanted to buy, similarly, the seller can sell lots of securities they want to sell. In fact, the liquidity of exchange makes the capital transferred between regions and industries at different times, so that resources can be configured.

The *purpose of the financial market* is to provide the convenience of the transaction, therefore the liquidity is the basic economic function of the financial market, Ruben argued that "Liquidity is a function of the size and frequency of the order volume, and when some transactions are entrusted to a particular trading system, it will attract other transactions entrusted to the system, and it can be said that liquidity is attractive for liquidity." (Ruben, 1998). Therefore some people can use liquidity to create greater liquidity.

A complete financial market includes four basic elements.

Firstly, *fund suppliers and fund demand party*. It includes government, financial institutions, enterprises and institutions, residents, foreign investors and so on, that can provide financial funds to the financial market, but also can raise funds from the financial market. This is a fundamental factor which can promote the formation and development of financial markets.

Secondly, *credit tools*. This is the object of trading of borrowing capital in financial markets. Such as bonds, stocks, notes, negotiable certificates of deposit, loan contracts, mortgage contracts and so on. it is the subject on which investors can invest and financing in finance market.

Thirdly, *credit intermediary*. This refers to some intermediaries between the supply party and demand party, it plays an important role in connecting, such as banks, investment companies, stock exchanges, securities firms and brokers.

Fourthly, *price*. The price of a financial market represents the value of the stock, that can

reflect the sum of the interest rate or rate of return of monetary.<sup>2</sup>

### **2.3 The definition of stock market**

The stock market is the place where shares are issued and traded, it includes two parts. The primary market and the secondary market. The joint-stock companies raise rapidly the large amounts of funds through the issuance of shares for the social, to achieve the scale operations of production, for the investors in social, they invest the company with the principle, benefit sharing, risk sharing.

### **2.4 Characteristic of stock market**

There are some characteristics of stock market.

Stock market has certain market liquidity, investors buy or sell the stock, but it mainly depends on the daily trading volume. Stock daily trading volume depends on the investor's psychological expectations. And it related to the relationship between the price and the value of the stock.

Investor can be easy to buy or sell in stock market. In the market, the trading of the stock needs some costs and commissions, but they are not too high for general investors.

The stock market is only open from 9:30 am to 4:00 pm in New York time; it is 3pm in China time. After closing of the stock market, over the counter is limited.

Because of the issuance of stocks, a lot of money flow into the stock market, but also it flows into the issue of shares of the enterprise. On the one hand, it can promote the collection of capital and greatly accelerate the development of commodity economy. On the other hand, a number of money is collected together because of the circulation of stocks.

In a word, through the issuance of stocks, a lot of money flow into the market, it accelerate the capital concentration and accumulation, on the other hand, stock market provides a place of the circulation of stocks, it facilitates people to buy stocks. And because stock markets movements are seen as predictors of economic activity, price of stock trading can reflect the relationship between supply and demand, it can provide reference for the stock

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<sup>2</sup> Reference:<http://wiki.mbalib.com/wiki/%E9%87%91%E8%9E%8D%E5%B8%82%E5%9C%BA>

pricing in the primary market.

## **2.5 The functions of stock market**

Stock market has some functions. These function can effect the stock market. There are three main functions of the stock market,

According to the financial function, the function of the stock market can be divided into three major functions, to promote the improvement of risk, information collection and enterprise monitoring.

The first function is to *promote the improvement of risk*, risk improvement function is mainly reflected in two ways, reducing the liquidity risk of investors and to provide risk dispersion mechanism for investors

Liquidity refers to the ability of the parties to convert assets freely and timely under the conditions of certain price. The liquidity risk is the uncertainty from the choice of any suitable channels and methods to achieve asset conversion, the presence of asymmetric information and transaction costs increases liquidity Risk, and the existence of these frictions has also created a demand for financial markets. Hicks (1996) argued that the financial market provides a place for people to freely convert their assets, at the same time, it brings the savings into long-term investment projects, that promotes the innovations of technological and invention. Diamond and Dybvig (1983) established models to study the impact of liquidity on people, and they found that the choice of low-return liquidity items was easier to retrieve the savings than high-liquidity items when externally hit, therefore, people are generally more inclined to choose the project of high-liquidity. Levine (1991) argue that in the stock market, people who were exposed to external shocks were able to sell stocks quickly and the companies that attracted investment were not affected.

In a word, the stock market was able to reduce liquidity risk by promoting stock market transactions. Particularly, when the transaction costs of the stock market are reduced, more high-return of non-liquidity projects will be invested if these high-return of non-liquidity projects have a strong external, then it will greatly accelerate economic growth.

The financial system can promote economic growth by diversifying risk and modifying

the allocation of resources. King and Levine (1993) argue that the investors have been struggling to innovate and seek technological change to achieve excess profits, because a portfolio can reduce the risk of innovation, financial markets provide a risk of diversification for innovation and technological change, thereby, financial market increases the society's technological change and the passion for innovation, promoting economic growth

The second function is *information collection*, assessment of entrepreneur, manager's behavior and market conditions is very difficult. Individuals generally do not have time, ability and energy to collect and process the information; therefore, investors tend to avoid investing in projects that lack reliable information.

Grossman and Stiglitz (1980) argued that the stock market has an important influence on the acquisition and dissemination of information. As the stock market grows larger and more liquid, the market participants are more motivated to get information about the business.

In such markets, parties are easy to make profit through the capitalization of private information, Kyle (1988) argued that, in a large, more liquid market, the transfer of shares trade as the list price, those who have got corporate information can earn income with the current price before the information is widely passed. This will encourage investors to increase the company's business research and supervision. Therefore, the development of the stock market will improve the company's information search. Merton (1987) argues that this market, which brings together a large amount of information to the enterprise, contributes to the allocation of resources, what's more, contributing to economic growth. The stock market information collection function is mainly expressed through the changes of stock market price, that is to say, the stock market price is the key to information collection function.

The third function is *enterprise monitoring*. Manne (1965) pointed out that a market with actively monitoring of the enterprise is conducive to the effective allocation of capital, which allows competent management group to control a large amount of resources in a relatively short period of time and managers with poorly performing will be replaced by the strongly, the market to monitor the company provides a mechanism that the services manager will be abandoned, once the company can not maximize the benefits of the shareholders.

In addition, there are four function of the stock market.

In terms of the *accumulative capital*, a listed company collects funds by issuing shares in

the stock market and then it will use the funds to operate and develop the company. Listed companies indirectly or directly issue shares. Firstly, the listed company can entrust the stock to the underwriters, underwriters issue the stock in the stock market, and investors invest in stocks. Secondly, the listed company directly issue shares in the stock market, and then the listed company can get funds from the investors. So capital is accumulated in the stock market and flows to the company.

It is *easy to transfer*. Actually, it is difficult to imagine that if stock market could not circulation stock. For example, when the investors choose to save the deposit in bank, they can not worry about the liquidity. In the constant time, they can get the interest and the money which has taken to bank. Or they can draw money out of an account before the time. But the stock is different. When the investors invest in stocks; the investors become the shareholder of the company. If the stock market can not transfer the stock, the shareholder can not get the money at the short term. So the stock market is the place that stock can circulate and transfer. Investors can buy or sell in stock market.

In fact, the stock itself has no value, although the stock is also the same as the commodities to circulate in the market. The price of the stock can be showed after trading in the stock market, and stock circulation price is different with the face value in the stock market, because shareholder participates in the profit sharing of the company which is based on the face value. In the stock market, share prices may be higher than its par value, there may be lower than their par value, it is possible that share price is same with its par value.

There are some factors to affect the stock circulation price in stock market, like the prospective earnings of stock, demand and supply of stock. If there is no stock market, no matter how the expected benefits, how big is the market interest rate changes will not have an impact on stock prices. So the stock market has added to stock price function.

## **2.6 The role of the stock exchanges**

The role of the stock exchange can be divided into four parts. The first is to provide the convenient and full conditions for the various types of securities. The second is to provide the opportunity of the competition of price for a variety of trading securities, and the opportunity



is open, fair, then it can find a reasonable price of transaction. The third is timely information disclosure. The fourth is to provide safe, convenient, quick trading and post-trade services.

The development of the stock exchanges can reflect the development of the stock market. And it can provide a place that investors can trade. A stock exchange can provide some information of the market, and according to the information, the investors can make some plan to invest.

All in all, stock exchange plays an important role in stock market.

For investors, it provides a convenient and safety place to trade, can create an opportunity for small investors. Investors can buy a small amount of stock to invest in the growth of large company, and get the profit through the stock exchanges. In stock exchange, it only approves that listed securities can be traded, and the listed company issue the securities through some strict regulations and rules, therefore stock exchanges are safety.

For company, the stock exchange can help the company raise fund to growth and operate. It also can be useful for government to raise fund, and then government develops.

According to demand and supply, stock exchange can evaluate the value of securities. It is very useful for investors and companies. Some changes of the country and economic are reflected in the price of stocks, the changes of shares can reflect the status of development in country and economic.

Stock exchange provide the liquidity. It provides the place to trade, investors can invest in long term securities, and the stock exchange can convert the long term investment into short term or medium term investment.

Stock exchange can promote investment and the development of economy. Because it provides the opportunity to invest for the investors.

## **2.7 The introduction of China's stock market**

Chinese stock market is an emerging market, whose invested-oriented structure is based on retail. It means that market mechanism is not imperfect, and the stock market develops slowly in China. It is different with developed market. In the emerging market, there are some characteristics. Firstly, the pricing efficiency is low, because of large number of speculators

and supervision barrier. Actually, some factors cause the low pricing efficiency. Secondly, it is anti-economic cycle, in China, there are contradictions between fiscal policy and monetary policy. Finally, in Chinese stock market, most investors are immature. And they think that, the cheaper the stock is, the more valuable it is. It is immature performance.

China is a developing country; it has potential in the future. During this period, the stock market is one important part to promote the financing. In this stock market, many investors buy some kinds of stock, there are trading, and company can get the capital to develop and operate. At the same time, the investors can get the benefit in the future.

At present, in the stock volatile market, there has been a new historical stage, at the same time, there have been some new problems. Because of the volatility in stock market, a large number of investors are afraid of the risk, the quantity of investor is reducing. Then the China's stock market, through the years of development, has made certain achievements. But in the status of China's stock market, they can be found in the development of China's stock market, there are some problems. Strengthen the supervision of securities regulatory authorities, establish and improve the legal system, improve the management system and promote market reform methods.

### **3 The structure of stock market in China**

The structure of stock market in China can be divided into three groups, managerial stock market, trade and services institution, investors. What's more, the structure can be divided into two parts, the primary market and the secondary market. In addition, the stock market has some characteristics.

#### **3.1 The characteristic of the stock market in China**

In China, the trading of stock is very special compared with other country. Here is some particularity.

First of all, there is *special supply and demand*. In 2001, this country had changed the system in the concentrations of issuance of securities regulation. It has changed from the examination system to the approval system. But the quantity of the listed company is limited. The company is recommended by broker and approved by professor. It is not the consequence of the demand and supply in the stock market.

Secondly, it is *market segmentation* of the particularity. According to the different investment subjects, there exist state shares, legal person shares, individual stocks and foreign capital shares in China. Among that, the state shares and legal person shares can't be listed and non-negotiable in the stock market. Because its holdings of all the shares of listed companies are amounted to as much as 65%, it caused the problem, in the stock market, which the same shares with different prices, the same shares different rights. According to Article 31 of the Guidelines for the Articles of Association of Listed Companies promulgated by China Securities Regulatory Commission, the shareholders can enjoy the rights and undertake the relevant obligations according to the types of shares they hold. If the shareholders hold shares of the same type, they will enjoy the same rights and bear the same kind of shares obligation. From the system, we can see, they have tacitly approved the rational phenomenon of the same shares of different rights and the same right with the different price.

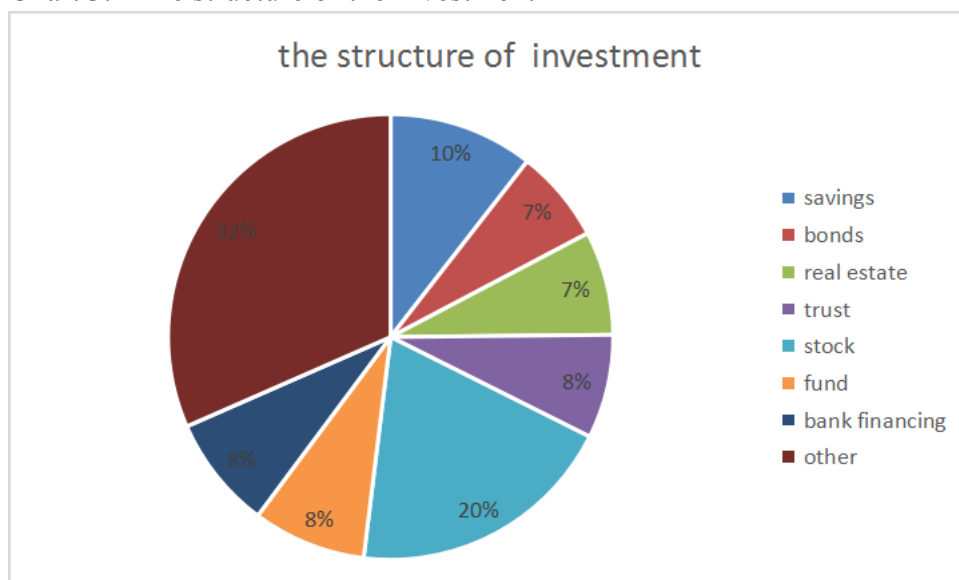
At present, in the stock volatile market, there has been a new historical stage, at the same time; there have been some new problems. Because of the volatility in stock market, a large number of investors are afraid of the risk, the quantity of investor is reducing. It is a new

practical problem they are facing. Therefore, during this period, we should carefully study the internal factors that affect the volatility of stock price except external factors, and we should make objective analysis and evaluation of the current stock market, then find out the problems in China's stock market, in the end, we come up with the measures in order to solve the problem, so that the healthy development of China's stock market.

### 3.2 The overview of the China stock market

China's stock market there is potential to develop, with the economic development of China's stock market is rapidly growth.

Chart 3.1 The structure of the investment



Source: [www.zt5.com](http://www.zt5.com)

In the chart, it shows that the structure of the investment. The investors has different choice to invest with the fund, such as bonds, real estate, trust, stock, fund, bank financing. In these investment, the most of investors choose to invest bond. In this case, the existing fund is more and more in the stock market. The company can be easier to get the fund from the investors than before. The China stock market is more active. The development of the stock market can develop quickly.

With the development of the China's securities market, according to the experts own evaluation of the stock market, the stock market is divided into multiple stages. And the market is mainly divided into two periods, the first period is before 2007, at that time, China's stock market had not changed in the equity, the second period is after 2007, China's securities

market gradually completed the reformation of the equity division. In these period, it is obvious to find that the changes of the stock market. There is the significant difference between China's stock market reform at the two periods, in these period, it solves the problem that China's listed companies have only strongest status in the stock market, and the shareholders have the different rights at same shares,

China's securities market would develop in the new period. Listed companies become full circulation enterprises, the listed company can get some advances and views from the shareholders to guarantee the development of the enterprises, in addition, it can unsure that the investors and shareholders can get the rate of return of the investment. It is significant for the investors.

There is setback of the market after August 2009, it reflect the new development pattern alternates with the traditional stock market development, the fall of the stock market can reflect the tendency of the stock market is not ideal. At the end of 2014, the stock market gradually pick up, but the overall stock market is still unstable, it is a phenomenon of violent volatility.

China's stock market has a good investment environment, but the stock market lacks management, and it leads to the low efficiency of the control of external environmental, it is difficult to ensure the development of the stock market.

### **3.3 The integrated framework**

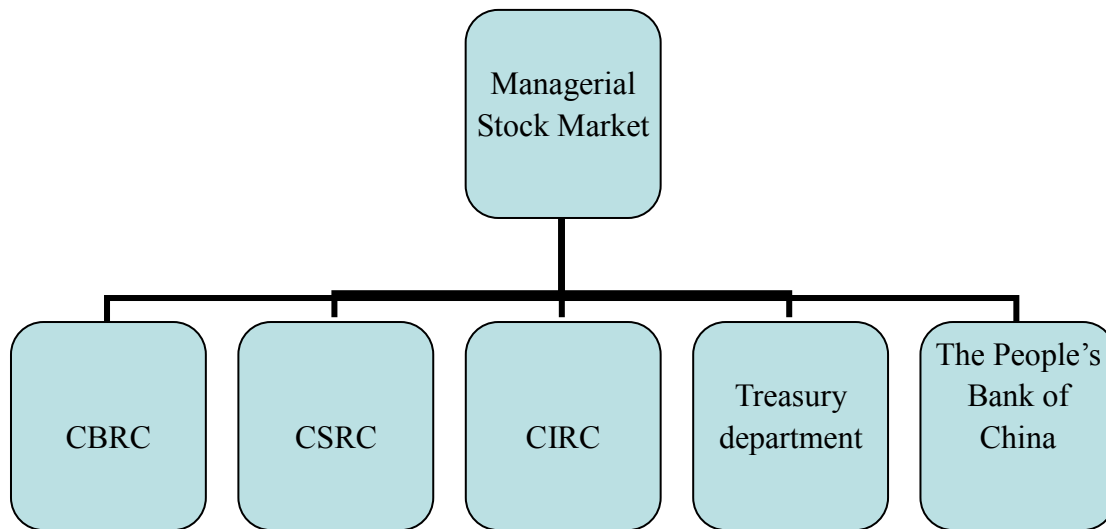
In general, the stock market is divided into two parts: the primary market and the secondary market. These markets are different and relevant.

#### **3.3.1 The managerial stock market**

Some investors trade of the stock in stock market, at the same time, there are some institution can control the stock market in China, like China securities Regulatory Commission, China Banking Regulatory Commission, China Insurance Regulatory Commission, treasury department, People's Bank of China.

The integrated framework

Chart 3.2 Managerial structure of stock market



Source: <https://www.touzi.com/news/021176-419319.html>

In China, managerial structure contains several groups; they are CSRC, CBRC, CIRC, treasury department, People's Bank of China. There are some law which can affect the stock market.

In terms of CSRC, it is *China Securities Regulatory Commission*, it engages in unified supervision and management of the future market. In the China Securities Regulatory Commission, it specifically establishes the futures regulatory department; the department is a functional sector that the China Securities Regulatory Commission supervises and manages to the futures market. The futures regulatory department is divided into five parts; the integrated office, the exchange supervision office, futures company supervision department, foreign futures supervision department and market analysis office. In accordance with the regulations, CSRC has to implement vertical management of securities and Futures regulators to strengthen the supervision of the Securities and futures industry, and strengthen management to the Securities and futures exchanges, listed companies, institution which engaged in securities and futures business, securities investment fund companies, securities and Futures investment consultancy agency and other bodies engaged in the inter mediation of securities and Futures regulation, and CSRC improves the quality of information disclosure. The organization monitors the issuing, trading, custody and clearing of stocks, convertible bonds and securities investment funds, approves corporate bond coming into market; and regulate the trading activities of listed bonds and corporate bond. CSRC regulates listed company and

it has disclosure obligation to shareholders of stock market behavior.

In terms of *CBRC, China Banking Regulatory Commission*, was established on April 25, 2003. According to the authorization of the State Council, China Banking Regulatory Commission implement unified supervision and management of banks, financial asset management companies, trust and investment companies and other deposits of financial institutions to maintain the legitimate and stable operation of the banking industry. CBRC Supervises and manages the banking financial institutions. And the institution implements bank policy and risk monitoring to the stock market.

In terms of *CIRC, China Insurance Regulatory Commission*, was established on November 18, 1998. It is a competent authority of China's commercial insurance. According to the implementation of administrative functions the State Council authorized, CIRC implements unified supervision and management of the national insurance market, and safeguards the legal and stable operation of the insurance industry in accordance with laws and regulations. According to the insurance policy, the organization affects the stock market.

In terms of *Treasury department*, the State Council of Ministry of finance is responsible for the financial. It was set up on October 1, 1949; it is also the Central People's Government the Ministry of finance. Treasury department make the adjustment of tax and fiscal policy. In terms of the tax, funds, it makes a difference to stock market.

In terms of *The People's Bank of China*, the bank has formulated and implemented monetary policy to prevent and defuse financial risks and maintain financial stability. And the policy can affect the stock market.

### **3.3.2 Trade and service institution**

There are some trade and service institutions in China.

In China, there are four main institutions, they are respectively *Shanghai stock exchange, Shenzhen stock exchange, security company, securities industry association*.

Shanghai stock exchange and Shenzhen stock exchange are trading with stock, bond, fund and financial derivative instrument, in Shenzhen stock exchange, it includes Growth Enterprises Market and small and medium enterprise board.

Security company can not only be underwritten, self-trading, but also self-agent and trading securities.

Securities industry association can control the operation of security market.

Table 3.1 The trade and service institution

institutions	business
Shanghai stock exchanges	Trading of stock, bonds, funds and financial derivative instrument
Shenzhen stock exchanges	Trading of stock, bonds, funds and financial derivative instrument and trading in GEM and SME board
China Financial Future Exchange	Transactions and settlement of financial futures, options and other financial derivatives
China securities depository and clearing co.	Provision the service of centralized registration, depository and settlement services for securities transactions
Securities company	Underwriting, self - trading or self - trading agent
Accounting firm	Disclose the company operating information, statements, audit
Law firm	The responsibility of the enterprise to declare the authenticity of the document; issued a legal opinion
Securities industry association	Regulate and supervise the operation of the securities market
China securities finance co.	Monitoring securities company margin, to provide financial services

Source: <https://www.touzi.com/news/021176-419319.html>

In addition, China securities finance corporation limited, it can be called as China Securities Finance Company, was established on October 28, 2011, is approved by the State Council, China Securities Regulatory Commission approved the establishment of a national securities financial institutions, the institution is the company which only engaged in China's financial business, and are designed to provide supporting services for securities companies'



margin trading. Its shareholders are: Shanghai Stock Exchange, Shenzhen Stock Exchange, Shanghai Futures Exchange, China Securities Depository and Clearing Co., Ltd., China Financial Futures Exchange, Dalian Commodity Exchange and Zhengzhou Commodity Exchange.

The *scope of business* of the company is to provide services for securities companies' margin trading; to regulate the supply of funds and securities in securities market by market oriented tools; to manage the financing of securities companies; Securities business operations, monitoring and analysis of margin trading, control of market risk and credit risk; and some to other business approved by the China Securities Regulatory Commission.

### **3.3.3 Investors**

Investors can be divided into two parts, the first is institutional investor, the second is individual investors. There are different types of institutional investors.

## **3.4 Primary market**

The stock issuance market is also known as the primary market. Stock issuance is an activity that the issuing company itself or through a securities underwriter sell new issued shares to investors (the underwriter can be the trust companies or securities firms). Stock issuance is no fixed place, and securities are traded in commodity counters or through the network.

### **3.4.1 The definition of the primary market**

The trading in primary market reflects the size of capital formation in a country. There are two purposes of the stock issuance, the first one is to raise fund for the new established company; the second one is to expand the capital for the existed company, they can operate their company and scale expansion investment.

Stock market refers to the whole process, from planning to sales; stock market is the market that deficit party gets the money. By means of the stock issuance market, new established company and existed company can raise fund. It is to convert savings into

investment, to create new financial assets, increase social total capital and production capacity, and promote the development of the social economy; the primary market plays an important role.

Primary market is not as well known to the public, because the process is not in public that the securities are sold to the original purchaser. Investment Bank is an important financial institution which sells the securities in the primary market for the first time. Investment Bank is engaged in underwriting of securities, and they ensure that the company's stock can be sold at a certain price, and then these securities can be sold to the public.

Stock primary market refers to the issuing market, in the stock primary market, the investors can subscribe for shares which are issued by the company. Through the primary market, the issuers, which refer to the issuing company, raised the required funds for the company, and the investors buy shares of the company, then the investors become the shareholders of the company, it achieves the process that the savings of the investors are translated into the capital of the company.

In Western countries, the primary market is also known as the securities market or original financial market, in the primary market, the group who wants the fund can be achieved to raise the fund by issuing of stocks and bonds. In the process of issuance of the stock, the issuers generally do not trade directly with the buyers who have the surplus fund. In general, there are intermediate agencies in this process, it is called securities brokers. Therefore the primary market is securities broker market.

### **3.4.2 Main subject of primary market**

In primary market, there are three main subjects, issuers, investors, underwriters.

#### **Stock issuers**

An issuer of stock refers to joint stock company that issues stock in primary market. Issuers generally are divided into two classes; companies can go through the formalities of a public stock offering, but the companies do not apply for coming into the market, other companies not only go through the formalities of a public stock offering, but also the companies do not apply for coming into the market.

In terms of *the qualification of stock issuer*, In China, it has principle about the stock issuers, and there are three basic stipulations.

Firstly, stock issuer groups must obtain business permits to become the corporate organization after registration in accordance with legal procedures. If the organization is newly established, the activity which the organization raises capital by floating shares before setting up can only be counted as activity which the organization subscribe to share capital. It is only the sponsor who can give the investors the receipt of shares. Stocks should be officially issued after the founding of the company.

Secondly, the joint stock company must have a clear article about the offering of stock. Public offering regulations must be approved by the people's Bank of China, and the articles should be written: reasons for issuing shares, issuing company name, the total amount of the issuing shares, the amount of per share, different restrictions for different investors and so on.

The last is the condition of the issuer. New established company should introduce some details to the public, such as the sponsor, business scope, and sponsor investments. If the company wants to capital increase, and enterprises should inform the public about the conditions of the company leadership, the project which the company operates, financial situation, development plans, and so on. These presentations must be real.

In terms of *the right of the stock issuer*, according to the development plan, the company can choose the issuing of the stock in stock market.

The company can issue the stock to set up a new company. And it has two ways to set up a new company; promotion and stock market flotation. There are some differences between the promotion and stock market flotation.

The former is that the company should have enough money to subscribe to the total stocks of initial offering and does not have to raise capital from the public. In this case, the capital source of setting up a new limited liability company will only the money which sponsors pay, accordingly each sponsor is the company's original shareholders. The latter, stock market flotation, refers to the sponsor just subscribe a part of the shares, other of which must raise capital from the public, and the investors can buy the shares and become the shareholder. Whether the company chooses the promotion and stock market flotation, the company has to issue stock. In China, it has a special stipulation; corporation which raises

funds from the specified placement is known as a stock company of a fixed direct collection. The corporation which raises capital from the public is known as Society Recruitment Company.

The former, stock company of a fixed direct collection, can issue shares, and the company should replace stock with stock certificate, stock certificate is a document which contains the amount of the shares owned by the shareholder. In this company, internal stuffs who hold the part of the shares should take the form of registered certificate of share, and they can not transfer to the outsider, after holding for three years, the internal stuffs can transfer to the stuff in the company. But the latter, Society Recruitment Company can not issue stock.

The company can raise the money to develop itself. When the company can issue new shares, the company should apply to the competent department for the amendment of register. The application should be written: the original shares, company property, the condition of the underwriters and so on. After the application was approved, the internal stuff have the priority to buy, and then the original shareholders can subscribe the shares according to the proportion of the shares which was held before, the rest of the shares can be transferred to the underwriters to sell to the public. A share capital increase and issuance of new shares will be able to meet the needs of corporate liquidity; or the company can raise capital to repay debt, it often was for the company's cash flow, but also the company issue the shares in order to improve the company's financial structure, which guarantees the proper proportion of liabilities and capital, and the company can maintain the stabilization of the finance. For example, the company will intend to issue the new shares, but the company meet some troubles, if the company needs money, the company can borrow from the bank, but it will increase the debt of the company, the company will issue the shares to raise the capital to repay the loan, to keep the appropriate proportion of the liability and asset, and maintain the balance. It is significant for the development of the company.

The company can issue the shares for some specific *objective*.

The first is to *issue stock for the stockholders profit*. According to the mandatory provisions of the law, corporations must be retained a portion of the funds from the annual net profits, to cover company losses or increase the company's capital, but the capital shall not be used for distribution of dividends, this part of the funds is legal accumulation fund. As the

accumulation of capital, some of the legal accumulation fund belongs to shareholders; this part can be directly used by the company, such as the value-relevance of earnings after capital reevaluation and a part of the capital premium earnings. The company can turn the profit into capital reserve to issue new shares, and each shareholder can get the stock according to the proportion of the share shareholder hold, it increases shareholder profit. There are a lot of growing companies, in order to development; they are unwilling to give the shareholders cash dividend. And after shareholders agreed, the companies pay the dividends with the new shares instead of cash dividends to the shareholders.

The second is to *issue stock for expanding the company's business*. With the pressure of competition and the capital securitization development, some joint-stock company expand the company business, they will intend to collaborate with other companies, and issue the shares to the investors who want to participate in the operation of the company. It is similar with issuing stock to the specific person. Sometimes the company prevents other company's merger and maintains the management right.

The third is to *issue the stocks when the company merges*. It is based on dissolution of consolidated company and the new company is established. The fourth is for other needs. In most situation that the company issues the shares, like the issuing bonds, they want to issue the bonds and get the enough capital, company to meet this a requirement to issue shares; it is same with the company come into the market to trade, the company should satisfy some conditions, like the sufficient proportion of equity, the company have to raise the money by issuing stock. When the company meets some troubles, the organization will issue the stock. As for what type of shares has been issued by the company, it shall issue corresponding shares according to the different needs.

In terms of *the obligation of stock issuer*, stock issuers are required to comply with statutory conditions and compliance with certain procedures when the company issue shares. Issuing stocks should meet these conditions.

At the first, it is initial offering condition. Initial offering refers to the issuing when the limited liability company was established. It is in accordance with the company law and regulations of the stock issuance and trading, this kind of the law, and the provisions of administrative regulations and departmental rules.

At the second condition of capital increase and issuing conditions. After the joint stock company was established, and company issues shares in order to expand the scale of production and increase the capital fund. It should follow the law of cooperation and the regulatory opinions on company limited by shares.

Thirdly, it is condition of the rights issue. Rights issue is an activity that a listed company offers recommendations to the company's existing shareholders after the approval of the involved departments, so the shares is held by existing shareholders in accordance with their proportion of the stocks. The company should follow the rules of the right issue which was published by china securities regulatory commission in 1994.

### **The stock underwriter**

In general, the stock underwriter is intermediary organization. The stock underwriters refer to *intermediary institutions* engaged in stock underwriting business, and keep the activity of stock underwriting and money exchange. It plays an important role in stock market, many companies choose to communicate with stock underwriters and the underwriters can sell to investors in primary market. In terms of business, stock underwriter handles the business about the sale of shares; the companies which issue shares to raise funds, the equity are distributed to investors. In other words, one side of the underwriting of the new stock of the IPO is the first stock market, the other side is the second stock market, and the underwriter keeps the relationship with both issuer and investor.

According to the different responsibilities and risk of operators which engage in security, underwriting can be segmented into two kinds of underwriting, *underwriting on consignment and exclusive distribution*.

The former is called the commission merchant; stock issuers commission the commission merchant to sell the shares to investors. In the distribution system, underwriters are only responsible for consignment procedures, does not guarantee that stocks sold out, if the commission merchant not sold all stocks within the agreed period, a part of the unsold will be returned to the issuer. Relationship between underwriters and issuers is agency; therefore the agent does not need to take risks. In China, underwriting fee is 0.5% to 1.5% of the actual total amount of shares sold.

The second is different. Underwriters must take full responsibility to sell stock, In other

words, according to the contract which has been concluded, the underwriters buy all stocks and then they sell the remaining part of the shares. Underwriters take the sales risk. It is buyer-seller relationship between the issuer and the underwriter. In general, total underwriting fees are 1.5% to 3% of the actual total amount of shares. The total income of the underwriters consists of the underwriting fees and interest which are paid by investors. If the issuer wants to issue large amounts of stock, the underwriter can cooperate with the others. It is effective to distribute the risk for the underwriter.

Within the period for underwriting the stock issue on a commission or sole agency basis, as an underwriter, the organization shall guarantee to first sell the stocks to subscribers.

In general, the organization is mainly composed of investment bank, Trust and Investment Corporation, securities and investment companies. But in China investment bank is different with others in foreign country. Therefore the category of stock underwriters is less.

### **Investors**

In stock market, investors mainly are divided into *institutional investors and individual investors*.

In China, there are some kind of individual investors and institutional investors

Table 3.2 The structure of investors in Chinese stock market

Individual investors	institutional investors
Citizen	QFII
	Bank
	Security company
Hong Kong investors who join investment by Lugu shares	Insurance company
	Pension Fund
	Investment fund

Source: <https://www.touzi.com/news/021176-419319.html>

In forms of individual investors, Chinese citizen can invest in China stock market. But the number of the shares is in the minority. For the foreign investors, they can join investment by Lugu shares, for the Lugu shares, the hong kong investors are entrusted to Hong Kong brokers and securities trading services company which was established by the Hong Kong

Stock Exchange apply to Shanghai Stock Exchange, the hong kong investors can buy or sell stocks within the specified range which are listed in Shanghai stock exchange.

For institution investors, QFII (Qualified Foreign Institutional Investors), in 2002, the People's Republic of China established a system in which insurance companies and securities companies outside China were able to invest in China's securities market, for example, foreign securities companies were able to invest in China's A shares. In China, RQFII focus on RMB Qualified Foreign Institutional Investors, it is very important for institution investors who what to invest in China's securities market.

### **3.4.3 Offering styles in primary market**

Actually, there are two ways to issue stock in primary market.

Firstly, it is *direct issue*. Stock is issued by the new company itself or investment companies, trust company and other underwriters give the appropriate assistance.

Secondly, it is *directly issue*. The underwriter underwrites the stock of the company, and the contractor can sale the stock in stock market. These ways have their advantages and disadvantages, the former distribution expenses are lower, but it takes a long time in rising funding; the latter the time to raise fund is relatively shorter, but high costs need to be paid, like the certain commission charge to the Investment Company, trust company or underwriter.

In different political, economic and social conditions, especially in the difference financial system and financial market management, there are some different offering styles, for example, according to issue object, it can be divided into two parts, public issue and private placement. According to issuer sell stock, it can be divided into two parts, direct issue and indirect issue. At present, the world's most widely use the most common way which is public issue and indirect issue.

China's stock issuance mainly take the public offering and listing, but also it is allowed listed companies to take non-public offering of shares to a specific object in compliance with the relevant provisions of the conditions.<sup>3</sup>

According to China's current relevant laws and regulations, China's stock company initial public offering of shares and after the listing to the public, China's stock company take public

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<sup>3</sup> Reference: <http://baike.so.com/doc/7904510-8178606.html>



offering additional to raise shares and take the way to issue of stock on network to the public investors and placing to institutional investors.

According to the provisions, the listed companies take public offering to non-specific object to raise shares or issue convertible bonds, the lead underwriters can classify different types of institutional investors who participate in offline placement and underwriters can set different proportion of placement to different institutional investors.

China's specific stock issuance methods from the internal subscription, limited and unlimited sales subscription form, linked with the bank deposit, power generation bidding, Internet pricing, corporate placement and Internet distribution, to the secondary market placement.

In the history, the first three kinds of distribution methods are taken in the 90's, offering linked with the bank deposit, the applicant should be rationed application form by virtue of the bank deposit in a certain percentage, and then through the sale of new shares by lottery, or set up a special fixed deposit savings deposit business, According to the order number, applicant can get the form by lottery.

Stock issuing at set price on network, the sale of the price is determined until stocks are sold during the reporting time. The underwriter takes the exchange trading system as the sole seller of the stock, investors buy stocks within the specified time. Before stock issuing at set price on network, the underwriter can set up offering special account and the special account for subscription funds in the stock exchanges. After the purchase, according to the actual funds in place, the exchange trading system can confirm the effective subscription.

Internet pricing of stock issue has two characteristics, security and low cost, Internet pricing of stock issue has become the main way for Chinese enterprises to issue shares publicly.

#### **3.4.4 Pricing of stock issue**

A stock issue price is the price actually paid when an investor subscribes to a newly issued stock. According to the provisions of China's "Company Law" and "Securities Law", the stock issue price can be equal to the face amount, and it can be also exceed the face amount, but not less than the face amount. The premium paid for the issue of the shares at a

price which is exceed the face value shall be included in the capital reserve of the issuing company. The issue of shares is issued at a premium, the issue price shall be determined by the issuer in consultation with the underwriting securities company.

And according to the provision of China's "securities issuance and underwriting management approach", it mentioned that the initial public offering of shares can determine the price by inquiry.

### **3.5 Stock secondary market**

The stock secondary market is the place in which the stock is traded, transferred and circulated. The secondary market mainly has two forms: the stock exchange market and the over-the-counter market.

#### **3.5.1 Classification of secondary markets**

The *stock exchange* market is a centralized trading market organized by the stock exchange, the stock exchange market has fixed trading placement and trading hours. Stocks go public after the stock exchange accept and handle the securities in accordance with the relevant laws and regulations, the investors can buy or sell through in the stock exchange securities the securities firms.

*Over-the-counter market*, which is the OTC market, also known as the counter market, the market is the market that buyers and sellers negotiate the stock price and trade face to face outside the stock exchanges, it does not have a fixed place, the transaction is mainly taken by telephone, the securities which are traded in OTC market are mainly not listed on the exchange, in some cases, some securities can be also traded which have been listed on the stock exchange on the OTC.

The securities firms in OTC market have dual identities, securities trading operating form and agents. As a securities dealer, the dealer can sell own securities to the customer or buy the customer's securities, and then they can earn the bid-ask spread; as a securities agent, they can buy or sell the securities to the other securities dealers as the client representative.

#### **3.5.2 Price formation**

The transaction price is related to buyers and sellers, and the transaction price is

determined by the market supply and demand under certain matching principle. The formation of the price is divided into two ways, continuous bidding and collective bidding. The basic principle of the transaction is the price priority, and the time priority under the same price.

The *call auction* is the activity that in the day before the opening, the investors can forecast the stock price according to the previous day's closing price, in the auction time, they can enter the computer host all orders, in accordance with the price priority and time priority principle to calculate the maximum volume of the price, the price will be the auction price, and this process is called the call auction.

In fact, the buyers and sellers investors make a deal after interval for a long period of time after the cumulative market trading report. The set price of the call auction is determined by the price that the transaction which is taken at the price can get the maximum volume.

Shanghai Stock Exchange in the normal trading hours that is Monday to Friday every week from 9:30 to 11:30, and 13:00 to 15:00 pm. In Shenzhen stock exchange, the continuous auction time is 9:30 am to 11:30, and 13:00 pm to 14: 57 pm, 14: 57 pm to 15: 00 pm is for the closing call auction time.

Each trading day 9:15 am to 9:25 am, computer matching system can collect all the effective commission and make the call auction.

The principle of *continuous bidding* is to queue pay and sell orders, for the purchase order, the price is arranged from high price to low price, if there are same price, the price will be order according the time the transaction was taken to the system. Secondly, the system automatically determines the transaction price of the call auction according to the bidding rules. The final auction of all the transactions is traded at this price. The principle of determining the transaction price of the call auction is that the transaction can get the maximum volume at the price. In fact, when the buyers and sellers continuously entrust to buy or sell securities, as long as each other meet the conditions of the transaction, the transaction can occur at any time point of the trading, the transaction price also continues to change because of supply and demand of the stock trade.

Continuous auction of the transaction plan is "price priority, the time priority under the same price", according to the order of principle, the transaction can be taken until the transaction can not be taken, unsettled transaction should queue up and wait for the

transaction. After the 9:30 opening, according to a continuous auction, transaction should be taken. And all orders which go beyond the limit are deemed to be invalid.

The process of the bidding can be like this. And the stock closed at \$ 10.13 on the previous day.

Table 3.3 Situation in call auction

Quantity to buy	Price (yuan)	Quantity to sell
---	10.5	100
---	10.4	200
150	10.3	300
150	10.2	500
200	10.1	200
300	10	100
500	9.9	---
600	9.8	---
300	9.7	---

Source:<http://baike.baidu.com/item/%E9%9B%86%E5%90%88%E7%AB%9E%E4%BB%B7?fr=aladdin>

Table 3.4 Situation in call auction

the cumulative quantity to buy	Price(yuan)	the cumulative quantity to sell	maximum volume
0	10.5	1400	0
0	10.4	1300	0
150	10.3	1100	150
300	10.2	800	300
500	10.1	300	300
800	10	100	100
1300	9.9	0	0
1900	9.8	0	0
2200	9.7	0	0

Source:<http://baike.baidu.com/item/%E9%9B%86%E5%90%88%E7%AB%9E%E4%BB%B7?fr=aladdin>

The chart reflect the cumulative quantity to buy and sell, the price of stock is expressed at every quantity. And the maximum volume of the stocks is calculated at the cumulative quantity to buy in call auction.

From the chart, there are two prices which can produce the largest volume, 10.10 yuan, 10.20 yuan, the volume is 300. If the Shanghai Stock Exchange is selected in the middle price of 10.15 yuan; if the Shenzhen Stock Exchange is selected the latest price of 10.10 yuan from the previous day closing price of 10.13 yuan. It is clear to observe the operating process call auction in the table.

### **3.5.3 OTC market**

From the perspective of the organization of the transaction, the capital market can be divided into exchange market and OTC market, OTC market is relative to the exchange market, which is the securities trading market outside the stock exchange. In the physical concepts, the traditional stock exchanges and OTC markets are divided into two parts: the exchange market is concentrated in the trading floor; the OTC market, also known as the "counter market", is scattered in the various securities counters market, there is no centralized trading venues and a unified trading system. However, with the development of information technology, the way of securities trading gradually evolved that the order can be collected through the network system, and then these orders can be processed by the electronic trading system, the bound between the OTC market and the stock exchange market gradually was blurred.

At present, the concept of stock exchange market and OTC market evolved into the concept of risk stratification management, that is, the different levels of market can make different arrangements in accordance with the risk of the listed varieties stock, through the listing or listing conditions, information disclosure system, transaction settlement system, securities product design and Investors and other constraints to achieve the level of risk of capital markets trading products.

And in terms of *the function of the OTC market*, the OTC market is important part in the capital market, and there are some functions.

The first function is to *increase the channel and improve the situation of the small and medium enterprise*. At present, the small and medium company is difficult to get the stable fund which the company can get. With the development of the OTC market, the small

company can have the choice to invest, and it provide a tool that the small and medium enterprise can invest.

The second function is to *provide the place of trading for securities which cannot be traded on the stock exchange*. In the multilevel capital market system, standards of going public in stock exchanges are high, and most companies are difficult to achieve these standards. However, the company's shares have the requirement of trading. Hence, OTC market provides a place for them, and investors have opportunities to redeem and invest.

The third function is to *providing more financial asset management channels about different risks*. Capital market is a venture-capital market, and different investor has different risk preference. If OTC market develops well, it can increase the supply of products which are from different risk level.

In China, the OTC market is divided into three parts, internal bank bond market. Agency share transfer system, the bond counter market.

Inter-bank bond market, the national inter-bank bond market is based on the China Foreign Exchange Trading Center and the National Inter-bank Offered Center; it can be call as trading center, and the Central Government Bond Registration and Clearing Co., Ltd. The market is the market place where the bond are traded and repurchased to the financial institution, such as commercial banks, rural credit cooperatives, Companies, securities companies and other financial institutions. The national inter-bank bond market was established on June 6, 1997. With the development of the over-the-counter market, the inter-bank bond market has become the main part of China's bond market.

Agent transfer system, agent shares transfer system is also known as the three board market, it is approved by the China Securities Industry Association; it is a share transfer platform that the securities company provides for the non-public stock limited company by the electronic transaction.

The third is bond counter trading market. Bond counter trading market is also known as counter-book-based bond trading business, it refers that the bank can conduct the transaction of the bond with the investors through the business outlets which includes electronic banking system, and according to the daily quotation of the national inter-bank bond market, the commercial bank hang out the buying and selling price of the government bond in sales

network, it ensures that individuals and business investors buy and sell bonds in time, the amount of fund in the commercial banks is balanced with the trading in the inter-bank bond market.

The trading in the counter has the following *characteristics*.

Firstly, it provides more convenient condition for individual investors to invest in secondary market, and it can attract more individual investors.

Secondly, it is easy to conduct open market operations.

Thirdly, it is helpful that the commercial banks can buy or sell the bonds at low-cost.

Finally, it is helpful that the market price and rate of return in the market reaches unanimity.

Bank bond counter trading can bring cash flow to commercial banks. One is the bond transaction commission income; the second is the difference of the buying and selling price, the third is distribution fees of bond issuance.

## **4 Assessment of trading possibilities in China**

In the different concepts, investor can invest in the China stock market, and from the stock index and the turnover and some indicators, the trading of the stocks can be assessed. And the stock exchange has the regulation of trading. In this part, it mainly introduced about the Shanghai stock exchange and the Shenzhen stock exchange.

### **4.1 The description of the stock exchanges in China**

In China, there are four main stock exchanges. They are Shanghai Stock Exchange, Shenzhen Stock Exchange and Hong Kong Exchanges and Clearing Limited, Taiwan stock exchanges.

#### **4.1.1 Shanghai Stock Exchange**

Shanghai Stock Exchange was founded in 1990. The Shanghai Stock Exchange is a legal person non-profit-making and is directly managed by the China Securities Regulatory Commission. It includes some main functions, the stock exchange can provide the place of securities trading, and it can make and develop business rules of the stock exchange, then the stock exchange accepts listing applications and manages the listing of securities. They organize and supervise the securities transactions; they will supervise the members and listed companies. SSE has obligation to manage and publish the market information. SSE market transactions use electronic trading, all trading of securities must be through the host computer for public bidding, by the host, in accordance with the price priority and time priority to automatically match the transaction. As of March 11, 2013, the SSE has 954 listed companies, the number of listed securities is 2214, and the stock market value is 160750.71 billion Yuan. The raised capital of listed companies is 25 trillion Yuan. A large number of pillars of the national economy, key enterprises, enterprises of basic industries and high-tech enterprises are not only to raise funds for development, but also convert the operating mechanism through the market. And SSE has some advantages. Like the main board market advantage; geographical advantage; listing cost advantage; technical advantages; Innovation advantage. The Shanghai Stock Exchange is unlike the Hong Kong Stock Exchange, is still not entirely open to foreign



investors because of tight capital account controlled by the Chinese mainland authorities and often manipulated by the decisions of the Central Government.

#### **4.1.2 Shenzhen Stock Exchange**

Shenzhen Stock Exchange was founded in 1990. The function was same with Shanghai Stock Exchange. Shenzhen market has rich resources of listing, emerging industries have an advantage, and the growth of listed companies stands out. In the GEM, there is good quality of the growth of enterprises of emerging economies. The Stock Exchange Index is an important asset allocation tool for the Shenzhen stock market. The Shenzhen Stock Exchange is one of China's three stock exchanges, alongside the Shanghai Stock Exchange and Hong Kong Stock Exchange. With a market capitalization of its listed companies around US\$2.285 trillion in 2015, it is the 8th largest stock exchange in the world, and 4th largest in East Asia and Asia. And a large number of the companies within this market are subsidiaries of companies in which the Chinese government maintains and control the interest. From the market data, we can see, as of June 2015, there are 1700 listed companies, and Market capitalization is RMB 3 521 745, 3 million, it is US\$514.7 billion.

#### **4.1.3 Hong Kong Exchanges and Clearing Limited**

The Stock Exchange of Hong Kong Limited (SEHK) is a stock exchange located in Hong Kong. As of 30 November 2013, SEHK had 1,615 listed companies, among that, it had 776 listed companies which are from mainland China, and 737 listed companies from Hong Kong and 102 listed companies from abroad. The market infrastructure was much improved with the introduction by the Exchange of the Central Clearing and Settlement System (CCASS is a securities settlement system used within the Hong Kong Exchanges and Clearing Limited market system.) in June 1992 and the Automatic Order Matching and Execution System (AMS) in November 1993. Since then, the framework of market rules and regulations, both Exchange-administered or otherwise, have been going through continuing review and revision to meet changing market needs while ensuring effective market regulation. There is a close-in-price rule for limit orders, which must be within 24 ticks of the current price.

Individual brokers may impose an even stricter rule. For instance, HSBC requires limit orders to be within 10 ticks of the current price. Broker support for triggered order types such as market-if-touched orders would allow placing orders further away, which would be sent to the exchange when the price condition was established.

#### **4.1.4 Taiwan stock exchange**

The Taiwan Stock Exchange is a government-owned private company, and the company is responsible for the operation and the development of the Taiwan securities market. The objective and strategy is supervised by fifteen managers and three supervisors, in Taiwan stock exchange, there are at least one third of the members who are appointed by the government. In addition, the main business of Taiwan is listing, trading and clearing, and supervision. These business include the consulting before listing, the supervision of the listing and the improvement of the trading system. Except these business, it also include the clearing and control of the illegal trade and the company provides the brokerage service. The objective is to maintain the market order and supervise the market. On the side, Taiwan stock exchange has 624 employee and sixteen sectors to provide comprehensive service.

TWSE has been established in 1961, the objective is to build a vibrant market, and high liquidity of securities. The stock exchange provide service for the securities market and support the development of the economic. The Stock Exchange is responsible for proving the opportunity of a convenient financing and process of the investment to ensure a safety environment for investors. The priority is to raise fund for the company to operate, scale up to promote competitiveness, the exchange can provide more employment opportunities. At the same time, TWSE supervise the market and manage the broker to protect the right of the public. There are three strategies of TWSE, the first is to provide the more transparent information, the second strategy is to establish fairer trading mechanism, the third is to provide more diversified financial product. TWSE continuously develop the securities market in order to improve the efficiency of the market and satisfy the demand of the listed company and investors.

The exchange is also guided by four basic functions. The first to serve the market, and

the second is to exploit new products, and the third is to enlarge the scale of market and to build an international alliance. TWSE pays attention to five objects, the exploitation of the new product, new mechanism of exchange and new market, new information and competition.

## **4.2 Stock price index**

The stock price index is called the stock index. In terms of *definition of the stock index*, The stock price is a reference number which can indicate the variation of the stock exchange, and the stock price index is drawn up by the stock exchanges, some of the stock index is designed by financial service institution. As stock prices fluctuate, the investors have to face the some different risk, like market price risk. As a investor, investor can be easy to know about the change of a specific stock price, but investors are difficult to understand the changes of the variety stock price, it will spend some times and money to know the changes, and it is hard to understand one by one. In this case, some financial service institution want to solve the problems and satisfy the need of the customers, the institutions make full use of their professional knowledge and take advantage of the strength of awareness of the market situation, therefore, the institutions makes the authorized strength of the stock price index, and then the institution can get some stock price index, the stock index can publicly release, finally, the price index can be used as the indicator to reflect the changes of the market price.

In terms of the *role of the stock price index*, the Investors can check out the result of their investment, and use the stock index to predict the moving direction of the stock market. At the same time, some people can use the reference number to survey and predict the tendency of the political, social and the overall economic development situation. And the size of the stock price index can reflect the size of the risk.

The *principle of the stock price index* is based on the specific time, and the stock price is indicated as 100 which show on this time, and as a reference stock price, the subsequent period can be compared with the reference number, and then it can calculate the percentage of the changes, sometimes the change will be positive, sometimes the stock price at the subsequent period will be lower than the basis, this is the stock price index at this period. After authorized strength of the stock price, the investors who wants to invest the stock can

understand the trend of the price, according to the changes of the stock index, and then they can predict the tendency of the stock price, they can make some decision.

Sample stock must be typical and universal, when choosing the sample stock, it is considered some factors, such as, its industry distribution, market influence, size and other factors. And the stock price index should be continuous.

When calculating the stock price index, the institution consider three factors, the first is the sample, that is, the institution extract a few representative stocks in a number of stocks, the second is weighted average, it is weighted average according to the unit price or gross number, or not weighted average, third is the calculation program, based on the data, the stock price index is calculated by the arithmetic mean, geometric mean, or both the price and the total number.

There are some different index in China, and it can be divided into several parts, and some index can indicate some status and in China, the index can be divided some different parts, such as, flag index, scale index, sector index, style index, thematic&strategy index, composite index.

And there are based on different base-point and base date, therefore the stock price index is chosen to compare the situation of relevant scale, for example, the investors intend to buy some stock of the company, and the investors can compare the stock with the relevant industry stock index, and the investors can estimate the stock, and make some decisions.

For the index name, the number shows the sample capacity that the stock index is designed by the sample. There are different sample capacities, some of the stock price index are 1000, some of the index are 100 or 50.

Table 4.1 Stock price index in Shanghai and Shenzhen

Index	CNI INDEX	Shenzhen market	Shanghai market
Flag index	CNI100	SZSE component index	SSE composite index
Scale index	40/300/1000, Large/middle/small cap	100/200/300/700/1000	SSE constituent index
Sector index	10 Sector index	10 sector index	Sector index
Style index	All/large/middle/small cap growth/value	300/700/1000 growth/value	SSE L&M&S growth/value
Thematic & Strategy index	CCTV50/ESG/ Dividend/ Regional/GDP Anti-inflation/	Equal weighted/dividend/ESG/emerging industry/innovative/ GDP	Dividend/consume/ Emerging industry/banks index
Composite index	A share/B share/ Corporate bond/ ETF s	SZSE composite index/ A share / B share/ETF s	SSE composite index A share/ B share Industrial index

Source: <http://www.szse.cn/main/en/marketdata/Indiceslist/>

From the chart, there are some index, and mainly Shenzhen and Shanghai stock index, and CHI index. In the different index, like the sector index, it is a series of index, in Shanghai stock exchanges, the sector index includes SSE energy sector index, SSE materials sector

index, SSE industrial sector index, SSE consumer discretionary sector index, SSE consumer staples sector index, SSE health care sector index, SSE financial sector index, SSE information technology sector index, SSE telecommunication services sector index, SSE utilities sector index. In the Shenzhen stock exchange, it is the same sector with the Shanghai stock sector index.

#### **4.2.1 Shanghai stock indexes**

The SSE stock index is designed and published, and the Shanghai Composite Index is the authoritative statistical data in China, the Shanghai composite index can measure the performance of the Chinese securities market, it can reflect the whole securities market situation. And a series of Shanghai composite index consists of 75 indexes, some of the index are equity index, there are sixty nine equity indexes, five bond indexes, one fund index. And the stock index includes scale index, sector index, style index, strategy index and thematic index, the institution improve the stock index and makes continuous improvement of the stock index system.

A series of the *Shanghai composite index* can measure the tendency of the securities market or their difference of the stock market. In addition, the composite index can reflect the trend of the stock price and the performance of every industry. The investors can make the investment plan according to the index, it provides some different investment portfolio, and it is helpful for the investors to analyze. With the development of economy, the securities market play an important role in the economic, the Shanghai composite index is very important indicator.

The index is based on the scientific approach, the Shanghai stock exchange set up the China index expert committee to ensure that the reliability of the stock index, the committee can provide some consultation service and the advice about the sample of the composite stock. Therefore the sample of the Shanghai composite stock is not fixed, and it is continuously changing. To ensure that the indicators are based on scientific methods, the Shanghai Stock Exchange set up the China First Index Expert Committee to provide advice and constituent stocks.

The *component index*, like the SSE180, it is based on the June 28, 2002, and its base-point is 3299.06. The index is based on the original SSE30 and adjusted by the stock exchange, the sample stock conclude 180 stock which has the most representative to the market in the A share, the constituent index is published on the June 1st, 2002. It is a basic reference index the Shanghai stock exchange design which can reflect the performance of the Shanghai stock market and the operational aspect. And the index can be a standard of the investment evaluation. The principle of authorized strength of the SSE constituent index is based on the development of China's securities market, drawing on international experience, and then the index is improved.

The stocks which are selected are some stocks which are large-scale, good liquidity, and the strong representation in the relevant market. Statistics show that the market capitalization of the Shanghai Stock Exchange 180 accounted for 50% of the market capitalization of the Shanghai market, and the volume of the transaction accounted for 47%, it is in favor of the indexing investment, and promotes the attention of "blue chips".

The *Shanghai composite index* is the most widely used index in China's securities market. The sample stock include the A share and B share which have listed in Shanghai stock exchange. And the newly listed shares are included in the calculation of the stock index on the day following the listing.

The weight of the stock index is the total share capital of the listed company. As the share of listed companies in China is divided into two parts, tradable shares and non-tradable shares, the circulating share is not in accord with the total share capital, therefore the stock which the total capital share is in the majority has significant influence for the stock index. The stock index always the tool of the institution to market making, and the tendency of the stock index is different with the ups and downs of the most stocks.

The *sector index* has some kind of index, such as the SSE A share index, SSE B share index.

The *fund index* in Shanghai stock exchange is called SSE fund index, the constituent stocks of the Fund Index are all securities investment funds listed on the Shanghai Stock Exchange, and the stock index can reflect the overall change in the price of the Fund.

The issuance of the Shanghai Stock Exchange stock index is almost the same as the

changes of the stock market; it is a reference that investors and securities practitioners predict the tendency of the stock price. In a word, the stock index is important.

Table 4.2 List of the Shanghai stock index

SSE stock index	Base day	Base point
SSE 180 index	2002/06/28	3299.06
SSE composite index	1990/12/19	100
SSE A share index	1990/12/19	100
SSE B share index	1992/2/21	100
SSE fund index	2000/05/08	1000

Source: <http://www.sse.com.cn/>

The chart is shown that the relevant stock index in Shanghai stock exchange and the index information about the base day of the stock index and the base point of the stock index. They are different with other index.

#### 4.2.2 Shenzhen stock indexes

The Shenzhen stock index is similar to the Shanghai stock index. A series of the Shenzhen stock index can measure the tendency of the securities market or their difference of the stock market. In addition, the Shenzhen stock index also can reflect the trend of the stock price and the performance in every industry. The investors can make the investment plan according to the index, it provide some different investment portfolio, it is helpful for the investors to be aware of the performance of the Shenzhen stock market. As a reference, the Shenzhen stock index is very important indicator for the investor.

The type of the Shenzhen stock index can be divided into four parts. The first is the comprehensive index, it includes the Shenzhen composite index, Shenzhen A share index, Shenzhen B share index, Shenzhen industry classification index. The second is the Shenzhen constituent stock index, it includes the Shenzhen constituent stock index, Shenzhen constituent A share index and the Shenzhen constituent B share index. The third is industry index. The final is the Shenzhen fund index, the fund index includes the SZSE ETF, the SZSE Lefu fund, the SZSE mutual fund.



The Shenzhen Stock Exchange prepares the *authorized strength* of the Shenzhen Composite Stock Index, and the base day of the stock index is April 3, 1991. The method of stock index calculation is basically the same as the Shanghai Composite Index, and the sample stock of the Shenzhen composite stock index is the all stocks which are listed on the Shenzhen Stock Exchange, the weight of the stock index is the total share capital of the stocks. Because the sample is the whole listed company, the index is more representative. The index is simultaneously released with the Shenzhen market information. It is a essential reference that the investors and securities practitioners judge the trend of Shenzhen stock market stock price.

In the past few years, the stock trading of Shenzhen Stock Exchange is not as active as the stock trading of Shanghai Stock Exchange, the Shenzhen Stock Exchange has changed the stock index compilation method, the SEZE use the chosen stock sample to calculate constituent stocks index.

Table 4.3 The composite index in Shenzhen stock exchange

Index name	Base day	Base point	Launch day
SZSE composite index	1991-04-03	100	1991-04-04
SZSE A share index	1991-04-03	100	1992-10-04
SZSE B share index	1992-02-28	100	1992-10-06
SZSE ETF	2010-21-31	1000	2011-12-02
SZSE Lefu fund	2004-12-31	1000	2011-12-02
SZSE mutual fund	2000-06-30	1000	2000-07-03

Source: <http://www.cnindex.com.cn/en/indices/SZSE/composite/>

#### 4.2.3 China Securities index

China securities index 300 is designed by the China securities index Co, Ltd, and the company is established on August 25, 2005. And the company is set up by the Shanghai stock exchange and Shenzhen stock exchange, the company is engaged in the exploitation of stock index and index derivatives.

CSI 300 index is the constituent index which the sample is chosen from A share in the

Shanghai and Shenzhen stock exchange, the volume of the sample stock is 300, therefore the name is CSI 300.

CSI 300 index covers the market value of about 60% of the market in Shanghai and Shenzhen stock exchange, the index has good market representation. CSI 300 Index is the first index which is jointly released by Shanghai and Shenzhen Stock Exchange, and CSI 300 can reflect the overall trend of A share market. The stock index can improve the index system, according to the CSI 300 index, people can observe the tendency of the stock market, the investors can understand the operation of the stock market and it provides a basic condition for the innovation and development of the index of investment product.

CSI 300 index is based on December 31, 2004, the base point is 1000 points, the sample stock is Large-scale and good liquidity stock.

Table 4.4 Three indexes and their market position.

China market	Market positioning
SZSE component index	The representative of innovation sectors
CSI 300	The most influential large-cap and blue-chips index
SSE composite index	The earliest and widely used stock index

Source: [http://www.cnindex.com.cn/sgt/sgt\\_en/szcz\\_en/szcz\\_zstz\\_en/](http://www.cnindex.com.cn/sgt/sgt_en/szcz_en/szcz_zstz_en/)

From the chart, it shows that the SSE composite index is widely used by the investors, and the Shanghai stock exchange composite index is similar to the Dow Jones industrial Average. The China securities index 300 is the most influential Large-cap and blue-chips index, the stock index is similar to the Standard & Poor 500, it has good influence in U.S market. In the U.S. Market, the NASDAQ composite stock index has the similar market position to the SZSE component index.

#### 4.2.4 Hang Seng index

Hang Seng Index is an important indicator of the Hong Kong stock market price, and the index is calculated from the market capitalization of a number of constituent stocks, and the constituent stocks which are selected are blue chips. The Hang Seng index represents the 63% coverage of the 12-month average market value of all listed companies which is listed on the

Hong Kong Stock Exchange, and the Hang Seng Index is calculated by the Hang Seng Index Co., Ltd. The company is responsible for the publication of the adjustment of the constituent stock and the company review quarterly.

The Hang Seng Index is compiled by Hang Seng Index Services Limited, it is a wholly-owned subsidiary company of Hong Kong Hang Seng Bank, the Hang Seng Index is based on the 50 constituent stocks which are listed in the Hong Kong stock market, the amount of distribution is seen as a weight, the index is weighted average stock price index. And the index is a stock price which has the most influential in Hong Kong, because the stock index can reflect the tendency of the stock price in the Hong Kong stock market.

The index was released publicly on November 24, 1969, the launch day is November 24, 1969 and a base period of the stock index is July 31, 1964. The base index is set at 100. The Hang Seng Index is called HSI.

The constituent stocks of Hang Seng Index is the blue-chips stock.

#### **4.3 The comparison of the stock exchanges**

The stock index is a proportional function of the index portfolio's market capitalization, the fluctuations of the stock index is the yield on this portfolio. However, in the calculation of the stock index, the transaction cost of the stock is not deducted, therefore the actual earnings of the investors will be less than the stock fluctuation of the stock index, and the stock fluctuation of the stock index is the maximum investment rate of return on investment portfolio.

##### **4.3.1 The comparison of the turnover**

Stock market volume is the amount of the transaction that the stock buyers and sellers conclude the transactions. Stock market turnover can reflect the number of transactions. In general, the number of shares can be measured by two indicators, the number of the stocks in transaction and the trading volume.

As a general rule, the stock which has large volume of the transaction and the price of the stock is increasing has a good tendency. When the trading volume continues to downturn,

it will generally appear in the bear market or stock consolidation stage, the market transactions are not active. Turnover is an important basis to judge the trend of the stock, and it provide the important basis for analysis of the main behavior. In fact, the investors pay close attention to stocks with unusually volatile volumes.

Table 4.5 The Shanghai market annual overview in 2016

Annual situation	Shanghai market	A share
Stock market value (million ¥)	28460763	28355504
Stock negotiable market value (million ¥)	24000624	238953.65
Total volume traded (million Shares)	4571862.358	4475179.977
Total value traded (million ¥)	50170042	49688034
average P/E Ratio	15.94	15.91

Source: [http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj\\_2016.pdf](http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj_2016.pdf)

<http://www.sse.com.cn/market/stockdata/overview/yearly/>

From the chart, it shows that in 2006, stock market value is 28460763 million yuan, and stock negotiable market value is 24000624 million yuan, the total volume traded is 4571862.358 million shares, and the total value traded is 50170042 million yuan, the average P/E Ratio is 15.94. And in the Shanghai stock exchange, the main stock traded is A share.

There is the data in Shanghai stock exchanges in 2016

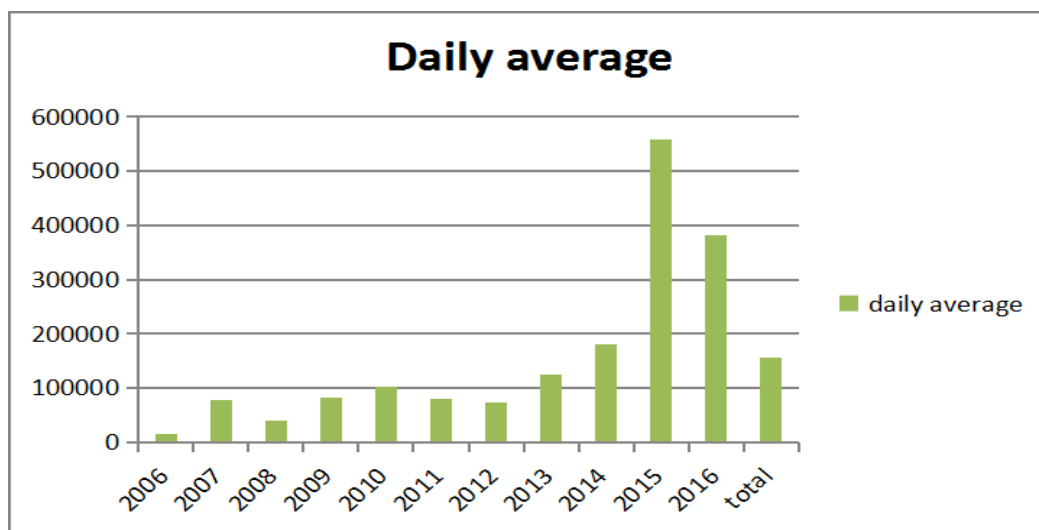
Table 4.6 The Shenzhen market annual overview in 2016

Annual situation	Shenzhen market	main board
Stock market value (million ¥)	22307825.46	7270977.57
Stock negotiable market value (million ¥)	15339543.54	5876976.04
Total volume traded (million Shs)	7120140.31	
Total value traded (million ¥)	93442586.13	
Average P/E Ratio	41.21	25.73

Source: <http://www.szse.cn/UpFiles/largepdf/20170321091732.pdf>

From this chart, the stock market value and the stock negotiable market value is lower than the Shanghai stock exchanges. And the negotiable stock is in the majority in Shanghai stock exchange. In the Shanghai stock exchange, the total volume traded is 4571862.358 million shares, in the Shenzhen stock exchange, the total volume traded is 7120140.31 million shares. In form of the total volume traded, the volume of transaction is higher than the Shanghai stock exchange. Therefore, the Shenzhen stock exchange is more active than the Shanghai stock exchange.

Chart 4.1 The daily average value of the Shenzhen stock exchange from the 2006 to 2007



Source: <http://www.szse.cn/main/marketdata/wbw/marketstat/>

And the chart is about the daily average volume of the trading, it is very obvious to know the tendency of the trading.

From this chart, it shows that the volume of the trading has the small changes from 2006 to 2012, it is relatively stable, but the daily average from 2006 to 2013 is lower than the daily average from 2006 to 2016. And then the daily average value traded was comparatively increasing from 2012 to 2015, and then it decreased in 2016, however, the daily average value traded from 2012 to 2015 is obviously higher than the daily average value traded from 2006 to 2016. As a whole, the investor is the more active than before, and they make some trading in Shenzhen stock exchange.

According to the value traded from 2006 to 2016, and the value of the trading increase from 2006 to 2007, and then the trading volume decreased from 2007 to 2008, from the whole years, the trading volume is constantly changing. From the same reason, the daily average is

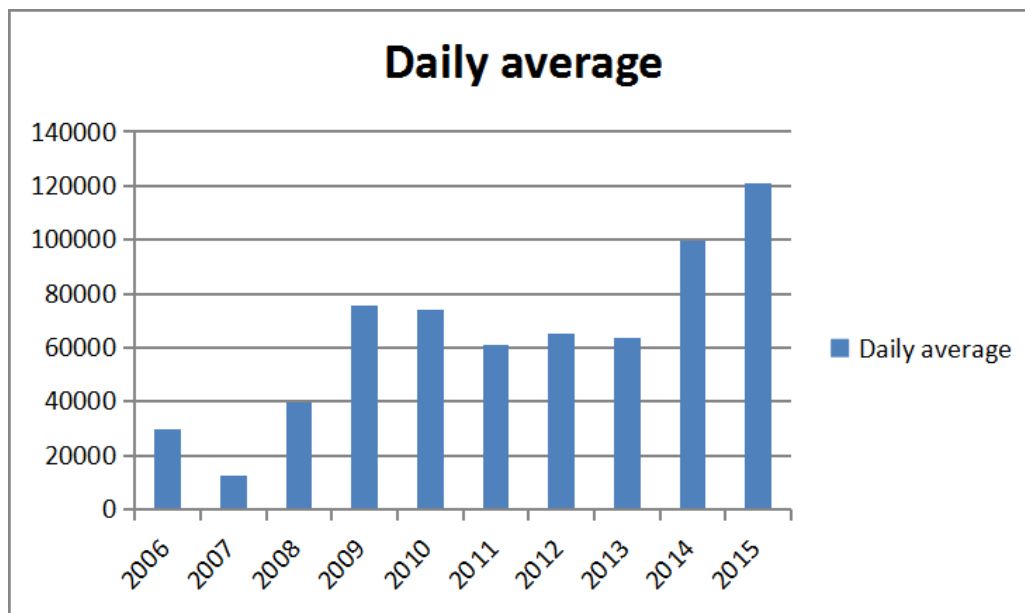
also constantly changing.

And in the Shanghai stock exchange, there are different volume of the transactions.

From the the information of the value traded, it express the volume of the trading of the stock from the 2006 to 2015, and in 2007, it appear the largest volume, the value of the trading stock is 26983887 million, and the second one is 29519420 million in 2015.

And the daily average of the volume of the trading stock is a constant volatility from 2006 to 2016.

Chart 4.2 The daily average of the trading in Shanghai stock exchange



Source: <http://www.sse.cn>.

Compared the total average of the the volume of the trading stock from 2006 to 2016, the first one is 156403.68 million, and higher than the total average in Shanghai stock exchange, which the total average is 67331.60. And for the Shanghai stock exchange, the daily average in 2015 is the largest than before.

#### 4.3.2 P/E ratio

P / E ratio refers to the ratio of the price of the stock and the earnings per share during an investigation period, the period is usually 12 months. Investors often use this ratio to estimate the investment value of a stock, or investor can compare the stocks of the different companies by using the indicator.

In general, if the price-earnings ratio of a company's stock is too high, the price of the stock becomes a bubble, the value is overvalued.

In the market, it refers to the static ratio in the market, *the feature of the ratio*, as a indicator, is usually used to compare the different stocks which the price is different, and judge whether the stock price is overvalued or undervalued. However it is not always accurate to measure the situation of a company by the ratio. In general, the price-earnings ratio of the company is too high, the price of the relevant stock has a bubble and the value of the stock is overvalued. When comparing the investment value of different stocks by price-earnings ratio, these stock must belong the same industry, if not, it is not significant, it is same rule when the investors want to invest the company which grows rapidly and is potential to develop in the future, because at this time, the company's earnings per share is more relatively close, it is more effective to compare with each other.

The P / E ratio is a reference value in the stock market; on the one hand, the investors usually do not believe that the profit figures which is calculated in strict accordance with the accounting standards can truly reflect the capacity of making a profit when the company continue to operate. Therefore the analysts often adjust the company's net profit by themselves.

In terms of the *Static price-earnings ratio*, the lower the price-earnings ratio, the investor can buy the stock at a lower price to get a return.

In General, the enterprises has the good growth, the price-earnings ratio is relatively high , such as the current consumption, tourism and banking real estate and other industries, the price-earnings ratio at these industries is higher than the ratio at the same industry in other foreign companies, because the investors is positive to predict the development of these companies in the future, and they are willing to purchase the stock at the higher price, to the contrary, those companies are potential to grow, and investors are willing to purchase the stock at the lower price. And the price-earnings ratio is not very high, such as the steel industry, investors expect the industry is not potential to develop in the future. The investors are willing to pay the lower price.

Table 4.7 The stock index in the fourth quarter in Shanghai stock exchange in 2016

Index name	Close index	The up/-down
SSE 180 index	7224.60	3.82%
SSE 50 index	2286.90	5.03%
SSE 380 index	5542.39	0.66%
SSE composite index	3103.64	3.29%

Source: <http://www.sse.com.cn/aboutus/publication/index/documents/>

From the information of the Shanghai stock exchanges, the correlation coefficient of the daily rate of the return between the SSE 180 index in this quarter and the Shanghai Composite Index was 92.77%, it explains that the index have the most representative of the market. On December 31, 2016, the circulation value of the Shanghai Stock Exchange 180 constituent stocks is accounted for 67% of the market value of Shanghai A-share market, and the total market value is accounted for the 61%, and it covers the main part of the Shanghai stock market.

In the same period, the correlation coefficient of the daily return between SSE 380 and SSE 180 Index was 67.78%, with market capitalization accounting for 18% of the market capitalization of Shanghai A-share market, and total market capitalization accounted for 19% of Shanghai A-share market, it covers the most part of the remaining market.

Table 4.8 The P/E ratio of three stock indexes

Index name	Earning per share (yuan)	P/E ratio (2016.12)	P/E ratio (2015.12)
SSE 50 Index	0.71	10.43	10.54
SSE 180 Index	0.62	12.34	12.76
SSE 380 Index	0.34	29.79	42.09

Source: <http://www.sse.com.cn/aboutus/publication/index/documents/>

At this quarter, the rate of price spread of the Shanghai 180 Composite Index rose 17.405%, the price spread is positively higher in the Shanghai A-share index system. At this quarter, the rate of the price spread of Shanghai Composite Index fell 6.24%, and in the range of a price drop of Shanghai A-share index system, it is higher.



Table 4.9 The accumulated return of the stock index in the fourth quarter in 2016.

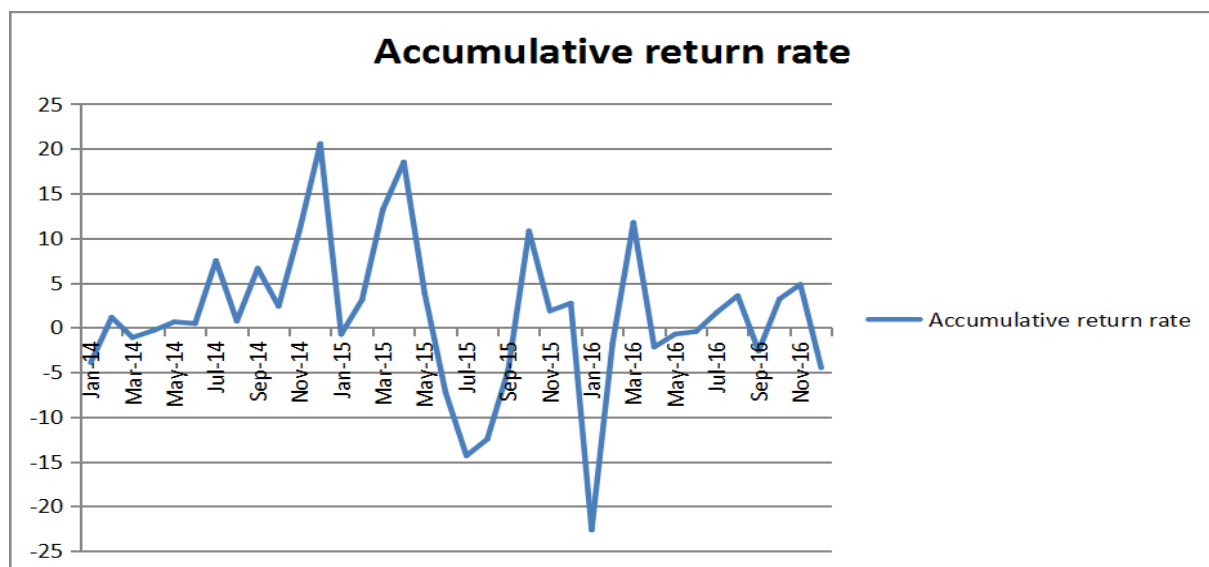
Index name	Accumulated return		Daily standard deviation
	3- month	YTD	3-month
SSE 50 index	5.03	12.80	0.75
SSE 180 index	3.82	13.72	0.69
SSE 380 index	0.66	22.72	0.84
SSE index	3.29	15.93	0.69
SEZE component index	-3.69	-19.64	-

Source: <http://www.sse.com.cn/aboutus/publication/index/documents/c/4242698.pdf>

From the table, it show that the accumulated return of SSE index and the Shenzhen stock component index, in the fourth quarter of 2016, the accumulated return of the SSE 50 is greater than others, it is 5.03%, compared with the SSE index, which the return is 3.29%, SSE 380 index is relatively lower. And the accumulated return of the SEZE component index is a negative data, and it indicated that at this period, the investor who invest the relevant stocks in Shanghai stock exchange has a good investment.

In forms of the daily standard deviation, the standard deviation can reflect the volatility. In this quarter, the relevant component stocks are relatively stable.

Chart 4.3 The accumulative return rate of the SSE composite index from 2014 to 2016



Source: [http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj\\_2016.pdf](http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj_2016.pdf)

In the chart of the rate of return, it was more obviously changed. The investors can get more the profit after march, 2016. And the profit which investors can get in these year is unstable. It reflect that the index has larger changes. And the stock market is developing.

Table 4.10 The relevant P/E ratio in the Shanghai stock exchange and Shenzhen stock exchange from 2010 to 2016

	2010	2011	2012	2013	2014	2015
Average P/E ratio in SEZE	44.69	23.11	22.02	27.76	34.05	52.75
MB A-share	35.98	18.75	18.51	19.80	25.88	31.22
MB B-share	23.10	9.63	12.21	14.47	10.50	13.99
Average P/E ratio in SSE	21.61	13.40	12.30	10.99	15.99	17.63
MB A-share	21.60	13.41	12.29	10.99	15.99	17.61
MB B-share	23.91	12.28	13.18	11.62	15.77	26.17

Source: [http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj\\_2016.pdf](http://www.sse.com.cn/aboutus/publication/yearly/documents/c/tjnj_2016.pdf)

<http://www.szse.cn/UpFiles/largepdf/20170321091732.pdf>

From the chart, it shows that the average price earning ratio in Shanghai stock exchange and Shenzhen stock exchange is continuous changing from 2010 to 2015. And the average price earning ratio in SSE decreased from 2010 to 2013, and then increased from 2013 to 2015. And the ratio of A share is similar to the average ratio in Shanghai stock exchange. But it is different with the B-share. The tendency of the average price earning ratio in Shenzhen stock exchange is increasing.

In Shenzhen stock exchanges, the the ratio of the A share is greater than the ratio of B share. As a whole, the price earnings ratio in Shenzhen stock exchange is higher than the price earnings ratio in Shanghai stock exchange. Compare the data, investors can judge the investment of the stock of the company which investor invested.

Table 4.11 The P/E ratio in A share market

The A share	The latest P/E ratio	6-month average P/E ratio	One year average P/E ratio
Shanghai A share	16.4	16.26	15.48
Shenzhen A share	40.61	41.99	41.2
CHI A share	21.95	22.11	21.32

Source: [http://www.csindex.com.cn/sseportal/csiportal/hy\\_syl/syl.jsp](http://www.csindex.com.cn/sseportal/csiportal/hy_syl/syl.jsp)

Compared the one year average P/E ratio, the the P/E ratio of the A-share in shanghai stock market is higher, but in Shenzhen stock exchange, is different with the one year average P/E ratio.

In term of the dividend yield ratio, dividend yield ratio is the ratio of the total dividend to the prevailing market price for one year. And the dividend yield ratio can get the annual dividend, expressed as a percentage of the final sale price of the stock, the indicator is a simplified form of rate of return of investment. The dividend yield is the ratio between the dividend and the stock price. In the investment practice, the dividend yield is one of the important rulers, the dividend yield ratio can measure whether an enterprise has an investment value.

Table 4.12 The dividend yield ratio in the A share market in April 2017

The A share	The latest dividend yield ratio	One year dividend yield ratio
Shanghai A share	1.72	1.86
Shenzhen A share	1.11	1
CHI A share	1.46	1.48

Source: [http://www.csindex.com.cn/sseportal/csiportal/hy\\_syl/syl.jsp](http://www.csindex.com.cn/sseportal/csiportal/hy_syl/syl.jsp)

In the chart of the dividend yield ratio, and it is easy to find that the Shanghai A share decreased from 1.86 to 1.72, and the dividend yield ratio of Shenzhen A share is opposite, the ratio increased from 1 to 1.11, it is a small charge, and the latest dividend yield ratio is very close to 1 in this year.

Compared the dividend yield ratio, the ratio in the Shanghai A share market is higher than the ratio of the Shenzhen A share market, and the dividend which investor can get is

higher.

#### **4.3.3 The trading fees**

During the trade in Shanghai stock exchange and Shenzhen stock exchange, the investor should pay some different fees. And the regulation of the fees between the SSE and SEZE is different.

There is a modern trading system which supports SSE's paperless trading at a highest speed of more than 8000 transactions per second. According to the principle of "price and time priority", the orders are matched automatically by computer system.

In term of the trading system, Shanghai stock exchange is similar with the Shenzhen stock exchange. According to the business processing media, the trading business can be divided into two categories, the first is trading system business and the second is non-trading system business. In these kind of business, the business of the trading which is based on the transaction system can be divided into two types of business, according to the business model the stock exchange adopted, centralized trading business and trading related services. In addition, the businesses which are based on non-trading systems include negotiated transfers, warrant creation and cancellation.

Centralized transaction refers to the exchange of securities through the transaction system to achieve to change the ownership of the securities, and it take some ways, such as price inquiry, the quoted price, auction. Trading related services refers to the stock exchange through centralized trading and it is closely related with the centralized securities trading system. Compared with the similar services the OTC market provided, the trading system have some difference. Firstly, it is provided the service through the trading system. Secondly, the distribution of special securities codes, finally, the transactions is conducted through brokers.

Table 4.13 The trading fee in SSE

Category		Fees	Fee Standard	Payer and Receiver
Trading	A share	Handling fee	0.00487% of trading value (both sides)	Paid by SSE member, etc. to the SSE
	B share	Handling fee	0.00487% of trading value (both sides)	Paid by SSE member, etc. to the SSE
	Preferred Stock	Handling fee	0.0001% of trading value (both sides)	Paid by SSE member, etc. to the SSE
	Stock pledged repo	Handling fee	0.001% of initial trading value, between 5-100 RMB	Paid by SSE member, etc. to the SSE
	Transfer of specific asset management scheme	Handling fee	0.0009% of amount transferred, yet no more than 100yuan/ per deal	Paid by SSE member, etc. to the SSE
	Securities trading with agreed repo	Handling fee	Charged according to current standards on initial and repo transactions	Paid by SSE member, etc. to the SSE

Source: <http://english.sse.com.cn/tradmembership/tradingfees/>

Table 4.14 The trading fee in SSE

Category	Fees	Fee Standard	Payer and Receiver	Category
Block trading	A and B shares	Handling fee	30% discount	Paid by SSE member, etc. to the SSE
Block trading	Preferable stocks	Handling fee	90% of 0.0001% of trading amount, below 100rmb	
Transfer agreement of stocks		Handling fee	Like secondary market, both ways, between 50-100,000 RMB each way	Paid by both parties to SSE

Source: <http://english.sse.com.cn/tradmembership/tradingfees/>

From the chart, it show that the trading fees in Shanghai stock exchange, and the fees are almost paid by the SSE member, in fact, the fees are handle fees, it is not difficult to find that the trading fees of the stock are 0.00487% of trading value, the investors must pay the trading fees. And the most trading fees are calculated by the percentage of the trading value, such as, 0.00487% of trading value, 0.0001% of trading value. And some fees are different.

Table 4.15 The trading fees of the SEZE

Regulatory Levy for Securities Transactions	A Share	Charged on both sides at 0. 02‰ of the traded value	Collected by SZSE on behalf of the CSRC
	B Share		
	Preference Share		
Stamp Duty on Securities Transactions	A Share	Charged on the sell side at 1‰ of the traded value. No charge on the buy side	Withheld by SZSE on behalf of tax authorities
	B Share		
	Preference Share		

Source: <http://www.szse.cn/main/en/Products/Trading/TradingFees/>

The trading fees of the A share and B share in SSE is same with the fees of the shares in SEZE. But it is different in the trading fees of the preferred stock, in Shanghai stock exchange, the trading fees of preferred stock is 0.0001% of trading value, and it is paid by the SSE member, and in the Shenzhen stock exchange, the trading fees of the preference stock is 80% of fees and it charged on ordinary share during pilot period. And in the regulatory levy for securities transactions, it is clear that the fees is charged on both sides at 0. 02‰ of the traded value, and the fees are collected by the SEZE on behalf of CSRC (China Securities Regulatory Commission).

#### 4.4 Assessment of trading possibilities

With the development of economy, the China's stock market develops rapidly. Not only domestic investors can trade stocks, but foreign investors can also trade stocks in China. Because of the exploitation of stocks, investors can be easier to invest than before.

##### 4.4.1 Trading possibilities of stock investors in China

In terms of the trade of the stock, the investors can invest the stock in stock exchanges,

as far as Chinese investor is concerned, at the first, the investor chooses the broker, in general, the investors have to entrust the broker to trade. Secondly investors make an agreement about the trade of the stock with brokers. Thirdly, the investors can entrust the brokers to buy the stocks through telephone or letter. And then the broker can buy the stocks in the stock exchange, finally, the investors can conduct to deliver.

For individual investors, individual investor can invest the stocks in the stock exchanges, and in the stock exchanges, investors have the choice of the stocks to invest. In China stock market, there are some individual investors. Compared with the institution investors, they are relatively free. Because the fund the institution invest is a large amount, the institution investors can choose strictly.

With the development of the growth enterprise board and the small and medium board, it provide the opportunity for the institution to invest. In the China stock market, the individual investors are in the majority. For the individual investors, it is relatively easy to invest in the market.

In terms of the foreign investors, if the foreign investors can trade in Chinese stock exchange, the process of trading is similar to the national investors. Foreign investors can find some information of the stocks before invest, and choose the stock. Investors can buy the stocks through the brokers, they can provide some services for the investors. And they can invest some stocks, like A shares, B shares, H shares, Red Chip and P chip. But investors should pay attention to the limited of the stocks. A shares just are traded by Qualified Foreign Institutional Investors, they are large foreign financial companies, such as Merrill Lynch, Goldman Sachs, Scotiabank. Red Chip stocks are not investments in private Chinese businesses.

If the foreign investors purchase the stock in non-Chinese stock exchange, actually, investors can also contract the broker, and trade the stocks in internet. And foreign investors can buy N share, they are listed on foreign stock exchange. Or they can purchase the shares in Chinese ADR or GDR, ADR is American Deposit Receipt, it represents non-U.S. company trading on a U.S. stock exchange. GDR is Global Deposit Receipt, it is similar with ADR. In addition, they can use other ways to invest, like investment of ETF or mutual fund. It is a good way for investors.

#### **4.4.2 Comparing situation of the stock market**

In fact, Chinese stock market is an emerging market, whose invested-oriented structure is based on retail. It means that market mechanism is not imperfect and the stock market develops slowly in China. But the market mechanism is improving. In China, the stock market is potential, but the stock market develops with some problems. Stock markets movements are seen as predictors of economic activity, price of stock trading can reflect the relationship between supply and demand, it can provide reference for the stock pricing in the primary market.

From the structure of the stock market, the management organization is more and more mature. The institutions include the China Securities Regulatory Commission, and it can mainly control the stock market, and the main stock markets in China are four stock exchanges, Shanghai stock exchanges, Shenzhen stock exchanges, Hong Kong stock exchange and Clearing Limited, Taiwan stock exchange. The scale of Shanghai stock exchange is very large, and Shenzhen stock exchange is divided into three board, the main board, the growth enterprise market, middle and small board, therefore the investors can investor in different field and different board. And the over the counter market is composed of financial market price, information and trading systems.

In terms of the Shanghai stock exchange and the Shenzhen stock exchange, the trading of the stocks are very active. And from the stock index, in the past, the stock market was relatively stable, and the index shows that the stock market is gradually mature, according to the average price earning ratio and the dividend ratio, in these years, the trading of stock is frequently. And the ratio is gradually increasing. the trading liquidity and validity will be improved. It can promote the development of the stock market in China. And most people are willing to invest stock with more funds.

In these years, Shanghai stock exchange established a mechanism, it is about Shanghai-Hong Kong Stock Connect. It refers to a mechanism, it is helpful to connect between two stock exchanges, the Shanghai stock exchange and Hong Kong stock exchange allow that the local investors can buy or sell the stocks which have been selected through local securities company or broker. In November 17, 2014, Shanghai-Hong Kong stock connect officially opened.



It expands the investment channels of investors between these places to enhance market competitiveness. Shanghai-Hong Kong Stock Connect contracts international investors to invest, it helps improve the structure of investors in the Shanghai market. It is convenient for the mainland investors to directly invest Hong Kong stock exchange with RMB. It is the same for investors in Hong Kong. It helps the flow of RMB.

The system of the supervision of the stock market is improving, and the stock exchanges are completed in these years. The developing of stock market is stable, and the investors invest in stock market.

## 5 Conclusion

the thesis includes the general financial system and financial market, and more details of stock market in China. And the object is to know the structure of stock market. It can be divided into several parts to understand the structure of the stock market. And it concludes the over-the-counter market and stock exchanges. There are several stock exchanges in China, the objective is to know the specific stock exchange and stock price indexes.

This thesis was divided to three parts, the first part is knowledge of the general financial system and financial market, and introduction of the China's stock market and its development. The second part is the China stock market, it includes its characteristic and its structures. In the different concept, the stock market can be divided into different part. And then the third part is the description of the stock exchanges and stock price indexes. According to the information of the stock exchanges, it reflects the situation of the stock market. In the end, it can get the result of the trading possibilities in China.

In fact, investors can trade in the stock market. With the development of stock market, investors can invest in various stocks, but in China stock exchanges, like Shanghai stock exchange, Shenzhen stock exchange, individual investors are in the majority. And Shanghai stock exchange is larger than others, and investors trade stocks frequently, some mechanisms can promote the investment in stock exchanges, like Shanghai-Hong Kong stock connect, actually, Shenzhen-Hong Kong stock connect also opened in December 5, 2016, it is possible to promote the development of stock market.

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## **List of Abbreviation**

CBRC: China Securities Regulatory Commission

CBRC: China Banking Regulatory Commission

CIRC: China Insurance Regulatory Commission

SSE: Shanghai Stock Exchange

SEZE: Shenzhen Stock Exchange

TWSE: Taiwan Stock Exchange

ADR: American Deposit Receipt

GDR: Global Deposit Receipt

ETF: Exchange Traded Fund

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Annex1: The turnover in Shanghai stock exchanges

Year	Value of year	Trading days	Daily average
2006	7161238	241	29714.68
2007	26983887	242	12330.11
2008	9725191	246	39533.30
2009	18465523	244	75678.37
2010	17900724	242	73969.93
2011	14837622	244	60809.93
2012	15869844	243	65308.00
2013	15116527	238	63514.82
2014	24397402	245	99581.23
2015	29519420	244	120981.23
total	179977378	2673	67331.60

Annex 2. The value traded of the Shenzhen stock exchange from 2006 to 2016

year	value of year(million)	trading days	daily average
2006	3873808.67	241	16073.89
2007	18764577.09	242	77539.49
2008	9938843.82	246	40401.8
2009	19873386.59	244	81448.31
2010	24742661.96	242	102242.4
2011	19318832.67	244	79175.54
2012	17865969.05	243	73522.51
2013	29667146.08	238	124651.87
2014	44470819.04	245	181513.55
2015	136105131.5	244	557807.92
2016	93442586.13	244	382961.42
total	418067043.7	2673	156403.68



Annex 3: Stock price index of SEZE from 2010 to 2013

	2010	2011	2012	2013
SEZE Composite Index				
High	1389.5407	1311.343	1010.4592	1101.5942
Low	921.3399	849.7599	734.2803	877.7598
Close	1290.8652	866.6534	881.1699	1057.6656
SEZE A Share Index				
High	1454.5319	1372.6681	1056.9146	1150.1929
Low	965.2165	889.3252	766.3397	915.8209
Close	1351.1426	906.9093	919.8002	1103.8066
SEZE B Share Index				
High	883.3257	845.4731	711.234	897.3417
Low	526.7296	532.7808	551.6452	736.3922
Close	824.8227	567.0357	711.234	868.1118
SEZE Component Index				
High	13807.2971	13158.2152	10612.893	9989.0932
Low	9171.0292	8711.5521	7710.8759	7495.0962
Close	12458.5523	8918.816	9116.4848	8121.7889

Annex 4: Stock price index of SEZE from 2014 to 2016

	2014	2015	2016
SEZE Composite Index			
High	1503.5846	3140.6627	2137.8833
Low	1007.2714	1428.37	1629.0659
Close	1415.1915	2308.9075	1969.1115
SEZE A Share Index			
High	1571.4881	3287.5701	2236.9484
Low	1051.3731	1492.2486	1702.7985
Close	1478.4549	2415.504	2059.9059
SEZE B Share Index			
High	1028.813	1607.2549	1272.086
Low	803.1484	1014.0692	1022.7464
Close	1028.813	1309.3631	1127.6996
SEZE Component Index			
High	11014.6248	18098.2743	11724.8809
Low	6998.1941	9290.8074	9082.5881
Close	11014.6248	12664.89	10177.1379

Annex 5: Stock price index of SSE from 2013 to 2015

Index	2010	2011	2012	2013	2014	2015
SSE Composite Index	2808.08	2199.42	2269.13	2115.98	3234.68	3539.18
SSE 50 Index	1977.37	1617.61	1857.68	1574.78	2581.57	2420.80
SSE 180 Index	6517.60	5009.29	5550.09	5040.27	8044.51	7995.77
SSE 380 Index	4256.27	2978.89	2944.52	3352.49	4866.71	6712.76